

Serial Number: 10/056,744B

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



OIIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/056,744B

DATE: 08/28/2002  
TIME: 11:52:32

Input Set : A:\PTO.DC.txt  
Output Set: N:\CRF4\08282002\J056744B.raw

4 <110> APPLICANT: Kapeller-Libermann, Rosana  
6 <120> TITLE OF INVENTION: 58860, A HUMAN CHOLESTERYL ESTER  
7 HYDROLASE AND USES THEREFOR  
9 <130> FILE REFERENCE: MPI2001-026P1RNM  
11 <140> CURFENT APPLICATION NUMBER: 10/056,744B  
C--> 13 <141> CURRENT FILING DATE: 2002-08-16  
15 <150> PRIOR APPLICATION NUMBER: 60/264,167  
17 <151> PRIOR FILING DATE: 2001-01-25  
19 <160> NUMBER OF SEQ ID NOS: 6  
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
23 <210> SEQ ID NO: 1  
24 <211> LENGTH: 1325  
25 <212> TYPE: DNA  
26 <213> ORGANISM: Homo sapiens  
28 <220> FEATURE:  
29 <221> NAME/KEY: CDS  
30 <222> LOCATION: (16)...(1212)  
32 <400> SEQUENCE: 1  
33 taactaggca tttct atg atg tgg ctg ctt tta aca aca act tgt ttg atc 51  
34 Met Met Trp Leu Leu Leu Thr Thr Thr Cys Leu Ile  
35 1 5 10  
37 tgt gga act tta aat gct ggt gga ttc ctt gat ttg gaa aat gaa gtg 99  
38 Cys Gly Thr Leu Asn Ala Gly Gly Phe Leu Asp Leu Glu Asn Glu Val  
39 15 20 25  
41 aat cct gag gtg tgg atg aat act agt gaa atc atc atc tac aat ggc 147  
42 Asn Pro Glu Val Trp Met Asn Thr Ser Glu Ile Ile Ile Tyr Asn Gly  
43 30 35 40  
45 tac ccc agt gaa gag tat gaa gtc acc act gaa gat ggg tat ata ctc 195  
46 Tyr Pro Ser Glu Glu Tyr Glu Val Thr Thr Glu Asp Gly Tyr Ile Leu  
47 45 50 55 60  
49 ctt gtc aac aga att cct tat ggg cga aca cat gct agg agc aca ggt 243  
50 Leu Val Asn Arg Ile Pro Tyr Gly Arg Thr His Ala Arg Ser Thr Gly  
51 65 70 75  
53 ccc cgg cca gtt gtg tat atg cag cat gcc ctg ttt gca gac aat gcc 291  
54 Pro Arg Pro Val Val Tyr Met Gln His Ala Leu Phe Ala Asp Asn Ala  
55 80 85 90  
57 tac tgg ctt gag aat tat gct aat gga agc ctt gga ttc ctt cta gca 339  
58 Tyr Trp Leu Glu Asn Tyr Ala Asn Gly Ser Leu Gly Phe Leu Leu Ala  
59 95 100 105  
61 gat gca ggt tat gat gta tgg atg gga aac agt cgg gga aac act tgg 387  
62 Asp Ala Gly Tyr Asp Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp  
63 110 115 120  
65 tca aga aga cac aaa aca ctc tca gag aca gat gag aaa ttc tgg gcc 435

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Input Set : A:\PTO.DC.txt  
Output Set: N:\CRF4\08282002\J056744B.raw

66 Ser Arg Arg His Lys Thr Leu Ser Glu Thr Asp Glu Lys Phe Trp Ala  
67 125  
69 ttt agt ttt gat gaa atg gcc aaa tat gat ctc cca gga gta ata gac 140  
70 Phe Ser Phe Asp Glu Met Ala Lys Tyr Asp Leu Pro Gly Val Ile Asp 483  
71 145  
73 ttc att gta aat aaa act ggt cag gag aaa ttg tat ttc att gga cat 155  
74 Phe Ile Val Asn Lys Thr Gly Gln Glu Lys Leu Tyr Phe Ile Gly His 531  
75 160  
77 tca ctt ggc act aca ata ggg ttt gta gcc ttt tcc acc atg cct gaa 170  
78 Ser Leu Gly Thr Thr Ile Gly Phe Val Ala Phe Ser Thr Met Pro Glu 579  
79 175  
81 ctg gca caa aga atc aaa atg aat ttt gcc ttg ggt cct acg atc tca 185  
82 Leu Ala Gln Arg Ile Lys Met Asn Phe Ala Leu Gly Pro Thr Ile Ser 627  
83 190  
85 ttc aaa tat ccc acg ggc att ttt acc agg ttt ttt cta ctt cca aat 200  
86 Phe Lys Tyr Pro Thr Gly Ile Phe Thr Arg Phe Phe Leu Leu Pro Asn 675  
87 205  
89 tcc ata atc aag gct gtt ttt ggt acc aaa ggt ttc ttt tta gaa gat 220  
90 Ser Ile Ile Lys Ala Val Phe Gly Thr Lys Gly Phe Phe Leu Glu Asp 723  
91 225  
93 aag aaa acg aag ata gct tct acc aaa atc tgc aac aat aag ata ctc 235  
94 Lys Lys Thr Lys Ile Ala Ser Thr Lys Ile Cys Asn Asn Lys Ile Leu 771  
95 240  
97 tgg ttg ata tgt agc gaa ttt atg tcc tta tgg gct gga tcc aac aag 250  
98 Trp Leu Ile Cys Ser Glu Phe Met Ser Leu Trp Ala Gly Ser Asn Lys 819  
99 255  
101 aaa aat atg aat cag agt cga atg gat gtg tat atg tca cat gct ccc 265  
102 Lys Asn Met Asn Gln Ser Arg Met Asp Val Tyr Met Ser His Ala Pro 867  
103 270  
105 act ggt tca tca gta cac aac att ctg cat ata aaa cag ctt tac cac 280  
106 Thr Gly Ser Ser Val His Asn Ile Leu His Ile Lys Gln Leu Tyr His 915  
107 285  
109 tct gat gaa ttc aga gct tat gac tgg gga aat gac gct gat aat atg 295  
110 Ser Asp Glu Phe Arg Ala Tyr Asp Trp Gly Asn Asp Ala Asp Asn Met 963  
111 305  
113 aaa cat tac aat cag agt cat ccc cct ata tat gac ctg act gcc atg 310  
114 Lys His Tyr Asn Gln Ser His Pro Ile Tyr Asp Leu Thr Ala Met 1011  
115 320  
117 aaa gtg cct act gct att tgg gct ggt gga cat gat gtc ctc gta aca 330  
118 Lys Val Pro Thr Ala Ile Trp Ala Gly Gly His Asp Val Leu Val Thr 1059  
119 335  
121 ccc cag gat gtg gcc agg ata ctc cct caa atc aag agt ctt cat tac 345  
122 Pro Gln Asp Val Ala Arg Ile Leu Pro Gln Ile Lys Ser Leu His Tyr 1107  
123 350  
125 ttt aag cta ttg cca gat tgg aac cac ttt gat ttt gtc tgg ggc ctc 360  
126 Phe Lys Leu Leu Pro Asp Trp Asn His Phe Asp Phe Val Trp Gly Leu 1155  
127 365  
129 gat gcc cct caa cgg atg tac agt gaa atc ata gct tta atg aag gca 375  
130 Asp Ala Pro Gln Arg Met Tyr Ser Glu Ile Ile Ala Leu Met Lys Ala 1203

## RAW SEQUENCE LISTING

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Input Set : A:\PTO.DC.txt

Output Set: N:\CRF4\08282002\J056744B.raw

```
131          385          390          395
133 tat tcc taa atggaaaaaa aaaaaaaaaa aaaaaaaaaa aaagcggccg      1252
134 Tyr Ser  *
136 ctgaattcta gacctgcccg ggcggccgct cgagccctat agtgagtaag ggcgaattcg 1312
137 cggccgctaa att      1325
139 <210> SEQ ID NO: 2
140 <211> LENGTH: 398
141 <212> TYPE: PRT
142 <213> ORGANISM: Homo sapiens
144 <400> SEQUENCE: 2
145 Met Met Trp Leu Leu Leu Thr Thr Thr Cys Leu Ile Cys Gly Thr Leu
146 1          5          10          15
147 Asn Ala Gly Gly Phe Leu Asp Leu Glu Asn Glu Val Asn Pro Glu Val
148          20          25          30
149 Trp Met Asn Thr Ser Glu Ile Ile Ile Tyr Asn Gly Tyr Pro Ser Glu
150          35          40          45
151 Glu Tyr Glu Val Thr Thr Glu Asp Gly Tyr Ile Leu Leu Val Asn Arg
152          50          55          60
153 Ile Pro Tyr Gly Arg Thr His Ala Arg Ser Thr Gly Pro Arg Pro Val
154 65          70          75          80
155 Val Tyr Met Gln His Ala Leu Phe Ala Asp Asn Ala Tyr Trp Leu Glu
156          85          90          95
157 Asn Tyr Ala Asn Gly Ser Leu Gly Phe Leu Leu Ala Asp Ala Gly Tyr
158          100         105         110
159 Asp Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Arg His
160          115         120         125
161 Lys Thr Leu Ser Glu Thr Asp Glu Lys Phe Trp Ala Phe Ser Phe Asp
162          130         135         140
163 Glu Met Ala Lys Tyr Asp Leu Pro Gly Val Ile Asp Phe Ile Val Asn
164 145         150         155         160
165 Lys Thr Gly Gln Glu Lys Leu Tyr Phe Ile Gly His Ser Leu Gly Thr
166          165         170         175
167 Thr Ile Gly Phe Val Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Arg
168          180         185         190
169 Ile Lys Met Asn Phe Ala Leu Gly Pro Thr Ile Ser Phe Lys Tyr Pro
170          195         200         205
171 Thr Gly Ile Phe Thr Arg Phe Phe Leu Leu Pro Asn Ser Ile Ile Lys
172          210         215         220
173 Ala Val Phe Gly Thr Lys Gly Phe Phe Leu Glu Asp Lys Lys Thr Lys
174 225         230         235         240
175 Ile Ala Ser Thr Lys Ile Cys Asn Asn Lys Ile Leu Trp Leu Ile Cys
176          245         250         255
177 Ser Glu Phe Met Ser Leu Trp Ala Gly Ser Asn Lys Lys Asn Met Asn
178          260         265         270
179 Gln Ser Arg Met Asp Val Tyr Met Ser His Ala Pro Thr Gly Ser Ser
180          275         280         285
181 Val His Asn Ile Leu His Ile Lys Gln Leu Tyr His Ser Asp Glu Phe
182          290         295         300
183 Arg Ala Tyr Asp Trp Gly Asn Asp Ala Asp Asn Met Lys His Tyr Asn
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RAW SEQUENCE LISTING  
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Input Set : A:\PTO.DC.txt  
Output Set N:\CRF4\08282002\J056744B.raw

```

184 305          310          315          320
185 Gln Ser His Pro Pro Ile Tyr Asp Leu Thr Ala Met Lys Val Pro Thr
186          325          330          335
187 Ala Ile Trp Ala Gly Gly His Asp Val Leu Val Thr Pro Gln Asp Val
188          340          345          350
189 Ala Arg Ile Leu Pro Gln Ile Lys Ser Leu His Tyr Phe Lys Leu Leu
190          355          360          365
191 Pro Asp Trp Asn His Phe Asp Phe Val Trp Gly Leu Asp Ala Pro Gln
192          370          375          380
193 Arg Met Tyr Ser Glu Ile Ile Ala Leu Met Lys Ala Tyr Ser
194 385          390          395
196 <210> SEQ ID NO: 3
197 <211> LENGTH: 1194
198 <212> TYPE: DNA
199 <213> ORGANISM: Homo sapiens
201 <220> FEATURE:
202 <221> NAME/KEY: CDS
203 <222> LOCATION: (1)...(1194)
205 <400> SEQUENCE: 3
206 atg atg tgg ctg ctt tta aca aca act tgt ttg atc tgt gga act tta 48
207 Met Met Trp Leu Leu Leu Thr Thr Thr Cys Leu Ile Cys Gly Thr Leu
208 1          5          10          15
210 aat gct ggt gga ttc ctt gat ttg gaa aat gaa gtg aat cct gag gtg 96
211 Asn Ala Gly Gly Phe Leu Asp Leu Glu Asn Glu Val Asn Pro Glu Val
212          20          25          30
214 tgg atg aat act agt gaa atc atc atc tac aat ggc tac ccc agt gaa 144
215 Trp Met Asn Thr Ser Glu Ile Ile Ile Tyr Asn Gly Tyr Pro Ser Glu
216          35          40          45
218 gag tat gaa gtc acc act gaa gat ggg tat ata ctc ctt gtc aac aga 192
219 Glu Tyr Glu Val Thr Thr Glu Asp Gly Tyr Ile Leu Leu Val Asn Arg
220          50          55          60
222 att cct tat ggg cga aca cat gct agg agc aca ggt ccc cgg cca gtt 240
223 Ile Pro Tyr Gly Arg Thr His Ala Arg Ser Thr Gly Pro Arg Pro Val
224 65          70          75          80
226 gtg tat atg cag cat gcc ctg ttt gca gac aat gcc tac tgg ctt gag 288
227 Val Tyr Met Gln His Ala Leu Phe Ala Asp Asn Ala Tyr Trp Leu Glu
228          85          90          95
230 aat tat gct aat gga agc ctt gga ttc ctt cta gca gat gca ggt tat 336
231 Asn Tyr Ala Asn Gly Ser Leu Gly Phe Leu Leu Ala Asp Ala Gly Tyr
232          100          105          110
234 gat gta tgg atg gga aac agt cgg gga aac act tgg tca aga aga cac 384
235 Asp Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Arg His
236          115          120          125
238 aaa aca ctc tca gag aca gat gag aaa ttc tgg gcc ttt agt ttt gat 432
239 Lys Thr Leu Ser Glu Thr Asp Glu Lys Phe Trp Ala Phe Ser Phe Asp
240          130          135          140
242 gaa atg gcc aaa tat gat ctc cca gga gta ata gac ttc att gta aat 480
243 Glu Met Ala Lys Tyr Asp Leu Pro Gly Val Ile Asp Phe Ile Val Asn
244 145          150          155          160

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DATE: 08/28/2002

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Input Set : A:\PTO.DC.txt

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```
246 aaa act ggt cag gag aaa ttg tat ttc att gga cat tca ctt ggc act 528
247 Lys Thr Gly Gln Glu Lys Leu Tyr Phe Ile Gly His Ser Leu Gly Thr
248 165 170 175
250 aca ata ggg ttt gta gcc ttt tcc acc atg cct gaa ctg gca caa aga 576
251 Thr Ile Gly Phe Val Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Arg
252 180 185 190
254 atc aaa atg aat ttt gcc ttg ggt cct acg atc tca ttc aaa tat ccc 624
255 Ile Lys Met Asn Phe Ala Leu Gly Pro Thr Ile Ser Phe Lys Tyr Pro
256 195 200 205
258 acg ggc att ttt acc agg ttt ttt cta ctt cca aat tcc ata atc aag 672
259 Thr Gly Ile Phe Thr Arg Phe Phe Leu Leu Pro Asn Ser Ile Ile Lys
260 210 215 220
262 gct gtt ttt ggt acc aaa ggt ttc ttt tta gaa gat aag aaa acg aag 720
263 Ala Val Phe Gly Thr Lys Gly Phe Phe Leu Glu Asp Lys Lys Thr Lys
264 225 230 235 240
266 ata gct tct acc aaa atc tgc aac aat aag ata ctc tgg ttg ata tgt 768
267 Ile Ala Ser Thr Lys Ile Cys Asn Asn Lys Ile Leu Trp Leu Ile Cys
268 245 250 255
270 agc gaa ttt atg tcc tta tgg gct gga tcc aac aag aaa aat atg aat 816
271 Ser Glu Phe Met Ser Leu Trp Ala Gly Ser Asn Lys Lys Asn Met Asn
272 260 265 270
274 cag agt cga atg gat gtg tat atg tca cat gct ccc act ggt tca tca 864
275 Gln Ser Arg Met Asp Val Tyr Met Ser His Ala Pro Thr Gly Ser Ser
276 275 280 285
278 gta cac aac att ctg cat ata aaa cag ctt tac cac tct gat gaa ttc 912
279 Val His Asn Ile Leu His Ile Lys Gln Leu Tyr His Ser Asp Glu Phe
280 290 295 300
282 aga gct tat gac tgg gga aat gac gct gat aat atg aaa cat tac aat 960
283 Arg Ala Tyr Asp Trp Gly Asn Asp Ala Asp Asn Met Lys His Tyr Asn
284 305 310 315 320
286 cag agt cat ccc cct ata tat gac ctg act gcc atg aaa gtg cct act 1008
287 Gln Ser His Pro Pro Ile Tyr Asp Leu Thr Ala Met Lys Val Pro Thr
288 325 330 335
290 gct att tgg gct ggt gga cat gat gtc ctc gta aca ccc cag gat gtg 1056
291 Ala Ile Trp Ala Gly Gly His Asp Val Leu Val Thr Pro Gln Asp Val
292 340 345 350
294 gcc agg ata ctc cct caa atc aag agt ctt cat tac ttt aag cta ttg 1104
295 Ala Arg Ile Leu Pro Gln Ile Lys Ser Leu His Tyr Phe Lys Leu Leu
296 355 360 365
298 cca gat tgg aac cac ttt gat ttt gtc tgg ggc ctc gat gcc cct caa 1152
299 Pro Asp Trp Asn His Phe Asp Phe Val Trp Gly Leu Asp Ala Pro Gln
300 370 375 380
302 cgg atg tac agt gaa atc ata gct tta atg aag gca tat tcc 1194
303 Arg Met Tyr Ser Glu Ile Ile Ala Leu Met Lys Ala Tyr Ser
304 385 390 395
306 <210> SEQ ID NO: 4
307 <211> LENGTH: 233
308 <212> TYPE: PRT
309 <213> ORGANISM: Homo sapiens
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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/056,744B

DATE: 08/28/2002  
TIME: 11:52:33

Input Set : A:\PTO.DC.txt  
Output Set: N:\CRF4\08282002\J056744B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:6; Xaa Pos. 1,2,3,4,6,8,10

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/056,744B

DATE: 08/28/2002

TIME: 11:52:33

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF4\08282002\J056744B.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:378 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order.  
 L:379 M:281 W: Numeric Fields not Ordered, <222> Sort in ascending order.  
 L:380 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:6  
 L:382 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:383 M:281 W: Numeric Fields not Ordered, <222> Sort in ascending order!  
 L:384 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:6  
 L:386 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:387 M:281 W: Numeric Fields not Ordered, <222> Sort in ascending order!  
 L:388 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:6  
 L:393 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:394 M:281 W: Numeric Fields not Ordered, <222> Sort in ascending order!  
 L:395 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:6  
 L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0